# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/675,016 | 09/30/2003 | Michaell A. Galvin | EMC03-19(03089) | 4852 |

| 7590 | 12/20/2006 |
|---|---|

Barry W. Chapin, Esq.
CHAPIN & HUANG, L.L.C.
Westborough Office Park
1700 West Park Drive
Westborough, MA 01581

| EXAMINER |
|---|
| RAMPURIA, SATISH |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2191 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|---|---|---|
| 3 MONTHS | 12/20/2006 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/675,016 | GALVIN ET AL. |
| | Examiner | Art Unit | |
| | Satish S. Rampuria | 2191 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *30 September 2003*.

2a)☐ This action is **FINAL**.     2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-32* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All  b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

## DETAILED ACTION

1.    This action is in response to the application filed on September 30, 2006.

2.    Claims 1-32 are pending.

### Oath/Declaration

3.    The Office acknowledges receipt of a properly signed oath/declaration filed

February 09, 2004.

### Specification

4.    The disclosure is objected to because of the following informalities:

The use of the trademark "Java" has been noted in this application (i.e.,

page 2, 5, 6 etc.). It should be appropriate or proper term (i.e., Java™)(see MPEP

608.01(v)) used, wherever it appears and be accompanied by the generic

terminology. Although the use of trademarks is permissible in patent applications,

the proprietary nature of the marks should be respected and every effort made to

prevent their use in any manner which might adversely affect their validity as

trademarks.

Appropriate correction is required.

### Drawings

5.    The drawings were received on September 30, 2006. These drawings are

acceptable by the examiner.

### *Claim Objections*

6.      Claims 8, 22, 29 objected to because of the following informalities:

Regarding claim 8 the period (.) is missing at the end of claim.

Regarding claim 22 the period (.) is missing at the end of claim.

Regarding claim 29 the acronym "ECC" should be accompanied with it's full form.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 101*

7.      35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8.      Claims 30-31 are rejected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter.

Claim 30-31 are not limited to tangible embodiments. In view of Applicant's

disclosure, specification page 20, the medium is not limited to tangible

embodiments, instead being defined as including both tangible embodiments (e.g.,

computer readable medium) and intangible embodiments (e.g., transmission media,

radio frequency (RF), infrared (IR), a carrier wave, telephone line, a signal, etc.).

As such, the claim is not limited to statutory subject matter and is therefore non-

statutory. See MPEP 2106.

To overcome this type of 101 rejection the claims need to be amended to
include only the physical computer media and not a transmission media or other
intangible or non-functional media. For the specification at the bottom, carrier
medium and transmission media would be not statutory but storage media would be
statutory.

### Claim Rejections - 35 USC § 102

9.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102
that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public
use or on sale in this country, more than one year prior to the date of application for patent in the United
States.

10.     Claims 1,3-7,10,11,13, 30-32 are rejected under 35 U.S.C. 102(b) as being
anticipated by US Publication No. 2001/0037490 to Chiang (hereinafter, Chiang).

**Per claim 1:**

Chiang discloses:

-   A method of modeling, building and implementing a software application on a
    remote deployment system (paragraph [0010] "web application generator, there
    is provided a method of generating computer code for a web application")
    corresponding to a base application comprising:

-   identifying a set of objects (paragraph [0065] "application object allows the event
    handlers") in the base application (paragraph [0054] "...foundation code...") for
    inclusion in the remote deployment and operable by an alternate control path

(paragraph [0065] "the HTTP request object received from the web browser (in the form of a URL address)... the HTTP response object sent back to the requesting web browser...");

- translating, via an object translator, the identified set of objects into a set of remote application objects parallel to the objects in the base application (paragraph [0052] "...web application generator (translator)... reads the set of web application screens as the input generates web application source code". Emphasis added.), the identified set of objects defining a graphical user interface operable to interact with a user (paragraph [0052] "...output code...comprises...graphical user interface (GUI) code");

- deploying the translated remote application objects on a remote server (See FIG. 1 and related discussion); and

- generating, from at least a subset of the translated remote application objects (paragraph [0055] "...web application generator... generates application framework"), executable objects executable by a server runtime engine at the remote server (paragraph [0035] "determines/coordinates the execution of each function performed by the web application"), the server runtime engine operable to generate transportable objects corresponding to the generated executable objects (paragraph [0035] "Application framework 410 provides instruction to the operating system of the web application server 100, and determines/coordinates the execution of each function performed by the web application"), the transportable objects further operable to generate, via the alternate control path,

GUI executable objects on a remote client runtime engine (paragraph [0057]

"...web application generator... based on the input tag type.... web application

generator... identifies an attribute value associated with the attribute name...

web application generator 205 relies on to generate event handler code 620 and

GUI code"), the remote client runtime engine responsive to the transportable

objects to generate the corresponding GUI executable objects (paragraph [0057]

"web application generator 205 relies on to generate event handler code 620 and

GUI code").


**Per claim 3:**

The rejection of claim 1 is incorporated and further, Chiang discloses:

- determining, via an object classifier in the object translator, if the object is a GUI

  object or a processing object (paragraph [0057] "...web application generator...

- based on the input tag type.... web application generator... identifies an attribute

  value associated with the attribute name... web application generator 205 relies

  on to generate event handler code 620 and GUI code"); and

- if the object is a GUI object, generating a reference to the server runtime engine

  (paragraph [0057] "...web application generator... based on the input tag type....

  web application generator... identifies an attribute value associated with the

  attribute name... web application generator 205 relies on to generate event

  handler code 620 and GUI code").

**Per claim 4:**

The rejection of claim 1 is incorporated and further, Chiang discloses:

- further comprising identifying, from the set of objects in the base application, GUI objects and processing objects, the GUI objects responsible for producing GUI display elements including at least one of GUI screens, GUI icons, GUI controls, GUI buttons and GUI selections (paragraph [0052] "...output code...comprises...graphical user interface (GUI) code" and paragraph [0056] "...generator reads...parses the input file to create object representation...").

**Per claim 5:**

The rejection of claim 4 is incorporated and further, Chiang discloses:

- identifying, via an association manager in the object translator, associations between the remote application objects and the GUI display elements (paragraph [0061] "Web application generator... identifies the input tag ("go"), attribute name ("href") and associated attribute value... web application generator 205 relies on the same rule as the first example to generate the same event handler method and GUI code"); and storing, in an associated object table, the identified associations ( paragraph [0053] "once...generated...it is stored on in the application directory..." See FIG.3, element 335).

**Per claim 6:**

The rejection of claim 5 is incorporated and further, Chiang discloses:

- wherein the associations are further indicative of associations between the

  remote application objects and external references in a data source (See FIG. 2

  and related discussion).

**Per claim 7:**

The rejection of claim 1 is incorporated and further, Chiang discloses:

- wherein the base application further includes a data source interface to an

  external data source, and translating further comprises identifying object

  references from the translated remote application objects into the data source,

  the data source responsive to the corresponding object reference (paragraph

  [0057] "...web application generator... based on the input tag type.... web

  application generator... identifies an attribute value associated with the attribute

  name... web application generator 205 relies on to generate event handler code

  620 and GUI code").

**Per claim 10:**

The rejection of claim 1 is incorporated and further, Chiang discloses:

- determining, for each of the translated application objects, overloaded methods

  corresponding to GUI display elements (paragraph [0057] "...web application

  generator... based on the input tag type.... web application generator... identifies

  an attribute value associated with the attribute name... web application generator

  205 relies on to generate event handler code 620 and GUI code"); and

- resolving, for the GUI display elements, style inconsistencies in the GUI display produced by the client runtime engine (paragraph [0026] "create the web application screens (graphical user interface) in one of several available formats, such as XML and XSL (Extensible Style Language), HTML, cHTML (compact Hypertext Markup Language) and WML").

**Per claim 11:**

The rejection of claim 1 is incorporated and further, Chiang discloses:

- determining base application objects employing compound GUI display elements (paragraph [0052] "...web application generator (translator)... reads the set of web application screens as the input generates web application source code". Emphasis added.);

- computing an aggregation of unary display elements consistent with the determined compound GUI display elements (paragraph [0056] "...parses the input file...object representation..."); and

- modifying the translated application object such that the client runtime engine employs the aggregated unary display elements (paragraph [0010] "Modified input files...received by the web application server...and the modified input files are compiled and dynamically bound with the compiled web application source code at runtime").

**Per claim 13:**

The rejection of claim 5 is incorporated and further, Chiang discloses:

- wherein the associations are further indicative of relationships between GUI

  elements and the executable objects in the server runtime engine (paragraph

  [0061] "Web application generator... identifies the input tag ("go"), attribute name

  ("href") and associated attribute value... web application generator 205 relies on

  the same rule as the first example to generate the same event handler method

  and GUI code").


*Claim 30* is the computer product claim corresponding to method claim 1 and

rejected under the same rational set forth in connection with the rejection of claim

1, above.

*Claim 31* is the computer data signal claim corresponding to method claim 1 and

rejected under the same rational set forth in connection with the rejection of claim

1, above.

*Claim 32* is the computer apparatus (device) claim corresponding to method claim

1 and rejected under the same rational set forth in connection with the rejection of

claim 1, above.

## *Claim Rejections - 35 USC § 103*

11.    The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.  Patentability shall not be negatived by the manner in which the invention was made.


12.    Claims 2 and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over

Chiang in view of US Patent No. 6,530,036 to Frey, Jr. (hereinafter, Frey).

**Per claim 2:**

Chiang disclose:

-   a corresponding remote application object for each  identified object in the base

    application (paragraph [0052] "...web application generator (translator)... reads

    the set of web application screens as the input generates web application source

    code". Emphasis added.), the generated remote application object operable  for

    execution in the remote deployment (paragraph [0035] "Application framework

    410 provides instruction to the operating system of the web application server

    100, and determines/coordinates the execution of each function performed by the

    web application").


Chiang does not explicitly disclose wherein translating comprises generating, via a

label mapper in the object translator.

However, Frey discloses in an analogous computer system wherein translating comprises generating, via a label mapper in the object translator (col. 5, lines 19-23 "generate and maintain mappings between an object's label").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of using label mappet to generate translation of objects as taught by Frey into the method of generating web application as taught by Chiang. The modification would be obvious because of one of ordinary skill in the art would be motivated to use label mapper in object translator to provide a distribution mechanism that reduces administrative associated with  sharing memory as suggested by Frey (col. 2, lines 1-35).

*Claim 16* is the apparatus (device) claim corresponding to method claim 2, and rejected under the same rational set forth in connection with the rejection of claim 2, above.

13.    Claims 8, 9, 12, 14, 22, 23, 26, 28, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang in view of Us Publication No. 2005/0154841 to Sastri et  al. (hereinafter, Sastri).

**Per claim 8:**

The rejection of claim 7 is incorporated and further, Chiang does not explicitly disclose wherein the base application is a SAN management application, the data

source is a SAN management server and the external references are indicative of a manageable entity in the SAN, the SAN management server operable to store and retrieve information about the manageable entities in the SAN.

However, Sastri discloses in an analogous computer system wherein the base application is a SAN management application, the data source is a SAN management server and the external references are indicative of a manageable entity in the SAN, the SAN management server operable to store and retrieve information about the manageable entities in the SAN (paragraph [0008] "Another known approach is the Storage Area Network ( SAN) model... SAN model typically comprises the use of a small network whose primary purpose is to transfer data, at extremely high rates... SAN system consists essentially of a communication infrastructure that provides physical connections... SAN-based data transfers are also inherently secure and robust... SAN system and also handles the global file locking, thereby preventing multiple clients from writing or updating the same data object at the same time").

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of wherein the base application is a SAN management application, the data source is a SAN management server and the external references are indicative of a manageable entity in the SAN, the SAN management server operable to store and retrieve information about the manageable entities in the SAN as taught by Sastri into the method of generating web application as taught by Chiang. The modification would be obvious because of one of ordinary skill in the art would be motivated to have an SAN management

application/server to provide physical connections, storage elements and computer systems are secure and robust as suggested by Sastri (paragraph[0007-0008]).

**Per claim 9:**

The rejection of claim 1 is incorporated and further, Chiang discloses:

- wherein the remote deployment comprises a web server and a browser (paragraph [0055] "...web application generator... generates application framework"), the web server operable to include the translated objects and the server runtime engine and the browser adapted to include the client runtime engine in communication with the server runtime engine via the alternate control path (paragraph [0035] "Application framework 410 provides instruction to the operating system of the web application server 100, and determines/coordinates the execution of each function performed by the web application").

Chiang does not explicitly discloses the alternate control path comprising an API portal, the API portal including an Internect connection.

However, Sastri discloses in an analogous computer system the alternate control path comprising an API portal, the API portal including an Interact connection (paragraph [0167] "The API function calls can return a status value that report on the result of the API function call").

The feature of the alternate control path comprising an API portal, the API portal

including an Interact connection would be obvious for the reasons set forth in the

rejection of claim 8.


**Per claims 12 and 29:**

The rejection of claim 7 is incorporated and further, Chiang does not explicitly

disclose wherein the base application is a storage area network (SAN) management

application and the data source is a SAN management server having a database of

manageable entities (ME) for providing storage data services via the SAN,   each of the

manageable entities responsive to the SAN management application and   further

wherein the GUI elements represent SAN elements, the SAN elements   corresponding

to the manageable entities in the SAN and the transportable objects for   reporting

status of the manageable entities from corresponding agent components in the    SAN,

each of the agent components corresponding to at least one manageable entity, the

agent components further responsive to the return transportable objects for managing

the manageable entities in the SAN.

However, Sastri discloses in an analogous computer system wherein the

base application is a storage area network (SAN) management application and the data

source is a SAN management server having a database of manageable entities (ME)

for providing storage data services via the SAN, each of the manageable entities

responsive to the SAN management application and   further wherein the GUI elements

represent SAN elements, the SAN elements   corresponding to the manageable entities

in the SAN and the transportable objects for   reporting status of the manageable
entities from corresponding agent components in the    SAN, each of the agent
components corresponding to at least one manageable entity, the    agent components
further responsive to the return transportable objects for managing the manageable
entities in the SAN (paragraph [0008] "Another known approach is the Storage Area
Network ( SAN) model... SAN model typically comprises the use of a small network
whose primary purpose is to transfer data, at extremely high rates... SAN system
consists essentially of a communication infrastructure that provides physical
connections... SAN-based data transfers are also inherently secure and robust... SAN
system and also handles the global file locking, thereby preventing multiple clients from
writing or updating the same data object at the same time").

The feature of wherein the base application is a storage area network (SAN)
management application and the data source is a SAN management server having a
database of manageable entities (ME) for providing storage data services via the SAN,
each of the manageable entities responsive to the SAN management application and
further wherein the GUI elements represent SAN elements, the SAN elements
corresponding to the manageable entities in the SAN and the transportable objects for
reporting status of the manageable entities from corresponding agent components in
the   SAN, each of the agent components corresponding to at least one manageable
entity, the   agent components further responsive to the return transportable objects for
managing the manageable entities in the SAN would be obvious for the reasons set
forth in the rejection of claim 8.

**Per claim 14:**

The rejection of claim 6 is incorporated and further, Chiang does not explicitly disclose wherein the associations are further indicative of references between manageable entities indicated in the SAN management server database.

However, Sastri discloses in an analogous computer system wherein the associations are further indicative of references between manageable entities indicated in the SAN management server database (paragraph [0008] "Another known approach is the Storage Area Network ( SAN) model... SAN model typically comprises the use of a small network whose primary purpose is to transfer data, at extremely high rates... SAN system consists essentially of a communication infrastructure that provides physical connections... SAN-based data transfers are also inherently secure and robust... SAN system and also handles the global file locking, thereby preventing multiple clients from writing or updating the same data object at the same time").

The feature of wherein the associations are further indicative of references between manageable entities indicated in the SAN management server database would be obvious for the reasons set forth in the rejection of claim 8.

*Claim* 22, 23, 26, and 28 is the apparatus (device) claim corresponding to method claims 8, 9, 12, and 14, respectively, and rejected under the same rational set forth in connection with the rejection of claims 8, 9, 12, and 14, respectively, above.

## *Conclusion*

14.    The prior art made of record and not relied upon is considered pertinent to
applicant's disclosure.

Any inquiry concerning this communication or earlier communications from
the examiner should be directed to **Satish S. Rampuria** whose telephone number
is **(571) 272-3732**. The examiner can normally be reached on **8:30 am to 5:00 pm**
Monday to Friday except every other Friday and federal holidays. Any inquiry of a
general nature or relating to the status of this application should be directed to the
**TC 2100 Group receptionist: 571-272-2100.**

If attempts to reach the examiner by telephone are unsuccessful, the
examiner's supervisor, **Wei Y. Zhen** can be reached on **(571) 272-3708**. The fax
phone number for the organization where this application or proceeding is assigned
is **571-273-8300**.

Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
published applications may be obtained from either Private PAIR or Public PAIR.
Status information for unpublished applications is available through Private PAIR only.
For more information about the PAIR system, see http://pair-direct.uspto.gov. Should
you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

Satish S. Rampuria
Patent Examiner/Software Engineer
Art Unit 2191

*Mary Steelman*
*Primary Examiner* 11-27-2006